

CALIFORNIA STATE DEPARTMENT OF PUBLIC HEALTH

GILES S. PORTER, M.D., Director

Weekly Bulletin



STATE BOARD OF PUBLIC HEALTH

JOHN H. GRAVES, M.D., President

EDWARD M. PALLETTE, M.D., Vice President

GEORGE E. EBRIGHT, M.D.

JUNIUS B. HARRIS, M.D.

WM. R. P. CLARK, M.D.

GIFFORD L. SOBEY, M.D.

GILES S. PORTER, M.D.

Entered as second-class matter February 21, 1922, at the post office at Sacramento, California, under the Act of August 24, 1912. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917.

Vol. XI, No. 33

September 17, 1932

GUY P. JONES
EDITOR

An Institute on Health Education

The importance of health education grows from year to year. This important public health function started years ago indiscriminately and without organization along standard lines. Fortunately, work in health education is now being established according to definite plans and public health educators are aware of the necessity for standardizing and expanding their activities. An indication of the growing importance of this work shows in the program for the first institute on health education which will be conducted by the Public Health Education Section of the American Public Health Association in Washington, D. C., October 23-24, immediately preceding the annual meeting of the association. Public health educators in California who are able to attend this institute will unquestionably gain valuable information that will enable them to expand their efforts in the promotion of public health education in this State.

The purpose of the institute is to provide instruction in the content and methodology of Health Education to a limited number of persons actively engaged in Health Education.

The students whom it is desired to attract to the institute, may or may not have had training in Health Education in one or the other of the very few institutions where it is available. They may have had a little or considerable experience. They may devote all their time to this work or it may be merely one of several activities. In any event, Health Education is for them a major preoccupation and they must from

time to time formulate programs of activities in Health Education and carry them through.

At the annual meetings of the American Public Health Association there gather a large number of experienced individuals from various divisions of the public health field. The Health Education Institute is scheduled in connection with the annual meeting so that advantage may be taken of their presence.

The staff of the institute is as follows:

Iago Galdston, M.D., Director

Medical Information Bureau, Academy of Medicine, New York, N. Y.

Bertrand Brown

Milbank Memorial Fund, New York, N. Y.

Evart G. Routzahn

Russell Sage Foundation, New York, N. Y.

Mary Swain Routzahn

Russell Sage Foundation, New York, N. Y.

Clair E. Turner

Massachusetts Institute of Technology, Cambridge, Mass.

W. W. Peter, M.D.

Cleanliness Institute, New York, N. Y.

Ira V. Hiscock

Yale University, New Haven, Conn.

H. E. Kleinschmidt, M.D.

National Tuberculosis Association, New York, N. Y.

George C. Ruhland, M.D.

Commissioner of Health, Syracuse, N. Y.

W. W. Bauer, M.D.

American Medical Association, Chicago, Ill.

Raymond S. Patterson, Ph.D.

John Hancock Mutual Life Insurance Company,
Boston, Mass.

Active health education workers in official departments of health—State, county and city—and in voluntary agencies are invited to enroll.

Health officers and directors of health organizations are urged to send to the institute the individuals responsible for Health Education activities in their units.

Application for enrollment in the institute should be made on the prescribed form obtainable from the American Public Health Association.

The registration fee is \$5 and must accompany application. Payment of fee entitles the student to all privileges of the institute and to private consultation with the instructors, if desired. Students, whether or not they are members of the American Public Health Association, will enjoy the special railroad rate of three-quarters of the regular round-trip fare. Checks and applications should be mailed to the American Public Health Association, 450 Seventh Avenue, New York, N. Y.

What is the program of the institute?

PROGRAM

Saturday, October 22, 9 a.m.—12

HEALTH EDUCATION INSTRUMENTS

Discussion of the instruments employed in Health Education; pamphlets, weekly and monthly publications and bulletins, charts, posters, health talks and radio talks; their special utility and their limitations.

Discussion leader: Evart G. Routzahn

Discussers: Bertrand Brown, W. W. Peter.

Saturday, October 22, 2 p.m.—5 p.m.

SOURCES OF INFORMATION

The responsibility of the health educator for the authenticity of his material. How to go about securing dependable information to present on the items selected, to the indicated audiences, and through the preferred media. Tapping authoritative sources. The cooperation of the medical profession.

Discussion leader: Ira V. Hiscock.

Discusser: Clair E. Turner.

Sunday, October 23, 9 a.m.—12

BUILDING PROGRAM

How to formulate a program of Health Education suitable to the community. How to determine the allocation of staff, money and effort. This problem will be considered from the viewpoint of both the official agency, that is, the Department of Health, and of the voluntary agencies.

Discussion leader: Raymond H. Patterson.

Discusser: Ira V. Hiscock.

Monday, October 24, 9 a.m.—12

PROGRAM EXECUTION

The avenues through which the program might be formulated; the population at large, special groups, schools, primary and secondary, teacher training organizations, work shops and work places, commercial organizations, etc.

Discussion leader: W. W. Bauer.

Discussers: George C. Ruhland, Evart G. Routzahn.

Students are invited to remain for the sessions of the Sixty-first Annual Meeting beginning on Monday, October 24, and continuing through Thursday afternoon, October 27.

A comprehensive program covering every current problem in public health administration and technique has been arranged. Each of the ten sections of the association—Health Officers, Laboratory, Vital Statistics, Public Health Engineering, Industrial Hygiene, Food and Nutrition, Child Hygiene, Public Health Education, Public Health Nursing, Epidemiology—will hold individual meetings. The Public Health Education Section has scheduled four half-day sessions, a dinner and two luncheon meetings. Included in that program are a Clinic on Printed Matter, a Clinic on Radio, a discussion on Health Motivation, one on Health Bulletins, and one on the Participation of the Medical Profession in Health Education.

While the program of the Public Health Education Section can reasonably be expected to interest most the Health Education Institute students, important papers and reports presented at meetings of other sections will yield much of value and inspiration.

You can readily see where the nurse must be the go-between and the agency responsible for a health program and the people it expects to reach. She is not, as stated before, responsible for policies, but is responsible for the interpretation of the service to be rendered. That the nurse and the nursing service is frequently misunderstood is not surprising, only as the nurse slowly but surely establishes herself as a friend will her services be understood and accepted.—*Wisconsin Health Bulletin.*

DIPHTHERIA CONTROL MEASURES*

W. H. KELLOGG, M.D., Chief, Division of Laboratories

Carriers.

Before undertaking a consideration of the application of biological methods to the prevention of diphtheria it would be well to review some of the facts regarding the carrier state. The natural habitat of the diphtheria bacillus is in epithelial and lymphoid tissues of lowered vitality situated in the pharyngotonsillar region of humans. Contrary to popular ideas cats are not susceptible to diphtheria. The human serving as the point of origin for new infections may be either a clinical case or a healthy carrier. From the localization in the throat of such a person the bacilli migrate to the throat of a new host by riding in the minute droplets of moisture that are expelled during coughing and sneezing or even ordinary talking and that float in the air in the immediate vicinity of their point of origin. Having reached the pharynx of a new individual the outcome depends on the local and general resistance of the new host. If the latter is immune to diphtheria by reason of the presence of antitoxin in his blood stream, nothing of moment happens to that individual, but if his tonsillar or pharyngeal lymphoid tissue is subnormal the invading bacilli colonize and another healthy carrier is launched on the community. If, on the other hand, he is susceptible to diphtheria, the invading organism through its power to secrete a lethal poison gives rise to a case of diphtheria. The diphtheria bacillus is unable to penetrate and establish itself in healthy and intact tissues, but if a diseased condition exists it can maintain itself long enough to secrete some toxin which, having a necrotic effect on tissues, still further establishes and extends the domain of the invading colony. Diphtheria toxin in addition to its necrotic action on tissues is a nerve poison and general systemic intoxicant; so the completed clinical picture of diphtheria is produced by the absorption of toxin from the localization in the pharyngeal or nasal mucous membranes.

It would seem possible for a person otherwise susceptible to diphtheria (no antitoxin in the blood) to resist invasion when exposed if he has an absolutely intact layer of healthy epithelium in his nasal pharynx and no tonsillar crypts harboring a low grade of infection. That this is so is evidenced by the actual finding of transient carriers of virulent diphtheria bacilli who by appropriate tests (Schick or Kellogg) are found to carry no antitoxin in their blood, but who, nevertheless, do not succumb to infection. They are protected by the mechanical immunity of an

intact epithelial layer. The chronic carrier, however, always possesses plenty of antitoxin in his blood. Although called a "healthy carrier" he is healthy only with respect to his freedom from the effects of an invasion of diphtheria bacilli. He would not be a chronic carrier if he did not have some pathological condition in his throat or nose to afford a refuge for the bacillus.

A carrier comes into his carrier state by one of two methods. He may have recently recovered from clinical diphtheria or he may have been merely in contact with a case or even with another carrier, and, being immune, he becomes a carrier instead of developing diphtheria.

From the foregoing it would appear that the carrier is an important source of new infections, and; while such is the case, there is considerable evidence that clinical cases are much more dangerous. For one thing, not all carriers are a menace for the reason that some are carriers of organisms that merely look like diphtheria bacilli but are really diphtheroids and totally nonvirulent. The microscopic examination of throat cultures does not distinguish between virulent or true and nonvirulent or false carriers. Only the virulence test on guinea pigs tells the story. There is another reason why a diphtheria carrier is not quite so important as a clinical case and that is that secondary cases are more likely to arise when the carrier has some obvious diseased condition or associated infection than when no such condition is evidenced, the diphtheria bacillus obtained in culture being in both cases virulent. Perhaps the reason is to be found in the possession of a higher degree of invasive power by one strain as a result of symbiosis in the diseased tissue.

Known virulent carriers must, of course, be kept from association with susceptible people until they can be released on the basis of disappearance of the carrier state or until a nonvirulent strain supersedes the virulent and the case can be proven to be a nonvirulent carrier by guinea pig test. Methods for the clearing up of carriers are frequently discussed. In general it can be said that the cure of a carrier is the cure of the local condition responsible for the maintenance of the carrier state. All such theoretical expedients as the use of local antiseptics, the administration of an antidiphtheritic vaccine, or the spraying of the throat with a staphylococcus culture have proven useless. Diphtheria antitoxin is, of course, useless since it is antitoxic only and our problem is not the neutralization of toxin but the destruction of bacilli which is not one of the properties of antitoxin. Indeed, the diphtheria bacillus will thrive in antitoxin as a culture medium. If tonsils are enlarged

* This article is the second in a series on diphtheria control by Dr. Kellogg.

and pathologic, they should be removed, and the continued finding of positive cultures is not a contraindication for the operation. The carrier state may persist after the removal of the tonsils in which case a nose and throat specialist will usually be able to find something that needs correction.

A virulence test should, of course, be done, since many persistent carriers are found to be nonvirulent and, hence, not subject to restraint. The services of the State Laboratory for virulence testing is open to all local health departments that are not equipped for the work. Since the virulence test is usually required only for release of quarantine, and since only health officers have authority to terminate quarantine, cultures for virulence tests are accepted only from health officers.

It is not believed that true diphtheria bacilli ever spontaneously become nonvirulent, but that when a virulent carrier becomes nonvirulent it is because a diphtheroid has taken up its residence in the throat, the diphtheria bacillus having taken its departure. There is no point, therefore, in making frequent virulence tests in recovered cases of diphtheria; at least such tests are not indicated until one or two months after recovery. The reason is that a recovered case begins his carrier state most certainly with a true diphtheria bacillus in his throat. The fact of his having had clinical diphtheria is proof of this without any laboratory test, and virulence tests soon after recovery would be a needless waste of animals. Most convalescent carriers clear up within thirty days, the cultures continuing virulent until they disappear altogether. A person who is not a convalescent from diphtheria, but who is found to be a carrier without any history of contact with a case of diphtheria, is very likely to harbor a nonvirulent diphtheroid. The usual laboratory practice, therefore, for virulence testing is—no tests for recovered cases until at least thirty, and preferably sixty days have elapsed. For the other kind of carriers, the so-called "casual carrier," a virulence test is made at once in order that no hardship be inflicted by continuing in quarantine a person who is not a true carrier.

(NOTE: The next installment of this article will treat of active and passive immunization.)

The effort to engineer life in the light of existing intelligence is as holy a task as any hitherto essayed by saint or martyr.—James Harvey Robinson.

At every feast remember there are two guests to be entertained—the body and the soul. What you give the body you presently lose, but what you give the soul remains forever.—Epictetus.

MORBIDITY*

Diphtheria.

26 cases of diphtheria have been reported, the cases being scattered over the State.

Measles.

25 cases of measles have been reported, the cases being scattered over the State.

Scarlet Fever.

46 cases of scarlet fever have been reported. Those communities reporting 10 or more cases are as follows: Los Angeles County 10, Los Angeles 12.

Whooping Cough.

168 cases of whooping cough have been reported. Those communities reporting 10 or more cases are as follows: Oakland 20, Los Angeles County 16, Los Angeles 42, Pasadena 14, San Diego 18, Ventura County 15.

Smallpox.

3 cases of smallpox from Los Angeles have been reported.

Typhoid Fever.

15 cases of typhoid fever have been reported, as follows: King County 1, Los Angeles 1, La Habra 1, Sacramento County 1, San Bernardino 3, San Francisco 1, Stockton 1, Watsonville 1, Sonoma County 1, Stanislaus County 1, Oxnard 1, California 2.**

Meningitis (Epidemic).

One case of epidemic meningitis from Stockton has been reported.

Poliomyelitis.

4 cases of poliomyelitis have been reported, as follows: Kern County 1, Los Angeles 1, Monterey County 1, San Francisco 1.

Food Poisoning.

11 cases of food poisoning have been reported, as follows: Burbank 1, San Francisco 10.

Undulant Fever.

2 cases of undulant fever have been reported, as follows: San Francisco 1, Modesto 1.

* From reports received on September 12th and 13th for week ending September 10th.

** Cases charged to "California" represent patients ill before entering the State or those who contracted their illness traveling about the State throughout the incubation period of the disease. These cases are not chargeable to any one locality.

U C MEDICAL SCHOOL
LIBRARY
PARNASSUS & THIRD A
SAN FRANCISCO CALIF